

REMARKS

This Amendment is responsive to the Office Action dated November 12, 2008. Applicant has amended claims 1, 16, 32, 39, 46, 55, and 63. Claims 1-91 are pending.

Examiner Interview

Applicant notes with appreciation the Examiner Interview of January 13, 2009, between the Examiner and Applicant's representatives, namely Kent Sieffert and Jim Shands, wherein Applicant's representatives discussed the present invention as it relates to the cited references, and proposed claim amendments.

Claim Rejection Under 35 U.S.C. § 102

2. In the Office Action, the Examiner rejected claims 1, 16, 32 under 35 U.S.C. 102(e) as being anticipated by Peterson (U.S. 7421487 B1). Applicant respectfully traverses the rejection to the extent such rejection may be considered applicable to the amended claims.

Regarding Claim 1

Peterson fails to disclose each and every feature of amended claim 1, as required by 35 U.S.C. 102(e), and provides no teaching that would have suggested the desirability of modification to include such features. Amended claim 1 is recited immediately below:

A method for distributing traffic flow criteria between network devices, the method comprising:

defining a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network;

generating, with a first routing device, a message that encodes routing topology information, wherein the routing topology information defines at least one route between a first network device and a second network device, and traffic flow criteria specifying the packet flow in accordance with the flow specification data type; and

communicating, with the first routing device, the message to a second routing device to direct the second routing device to control network traffic based on the traffic flow criteria,

wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow.

Claim 1 is directed to a method for distributing traffic flow between network devices that comprises generating, with a first routing device, a message that ***encodes routing topology information*** defining at least one route between a first network device and a second network device, ***and traffic flow criteria*** in accordance with the flow specification data type. Further, the traffic flow criteria comprises source information that identifies a source network device of the packet flow. In this way, Applicant has amended claim 1 to distinguish between routing information that specifies a router and traffic flow criteria that specifies a packet flow (i.e., a specific flow of packets traversing the network, such as a particular flow from a source to a destination for a given protocol). Moreover, amended claim 1 makes clear that the routing message includes **both**: (1) routing topology information defining at least one route, and (2) traffic flow criteria specifying the packet flow.

This is in contrast to Peterson. The Office cites to Peterson, col. 9, lines 44-57, reproduced immediately below, to support the assertion that Peterson discloses “defining a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified,” as recited in claim 1:

FIG. 4 is a flow diagram illustrating an exemplary mode of operation of router 27 when querying service management system 14 for QoS information. **Router 27 initially receives a routing protocol packet, such as a BGP packet, that defines a data flow within a network (58)**. Router 27 may, for example, receive a routing protocol packet that defines a new data flow within a VPN, such as VPN 22 of FIG. 1. Next, router 27 and, more particularly RP process 52A, compares information in the routing communication with selection criteria (60). RP process 52A may apply a route map that compares information in the routing communication with the selection criteria. The route map, for example, compare a BGP community of a BGP packet, a description of an MPLS packet, or IP addresses of an IP packet to the route map logic, i.e., the selection criteria. (Emphasis added.)

The routing protocol packet that defines a “data flow” referred to in Peterson is merely referring to use of a routing protocol to convey routing topology information of describing a **route** through the network. As seen above, Peterson specifically refers to a Border Gateway Protocol (BGP) packet as “a routing protocol packet...that defines a data flow within a network.” In Peterson, BGP allows network devices to communicate routes (i.e., network paths from routers to destinations). The BGP messages do not comprise “traffic flow criteria” in accordance with

any “flow specification data type,” as in claim 1. In contrast, embodiments of the present invention allow BGP to be *extended* to include these additional “traffic flow criteria” that can be used, for example, to specify individual flows of packets from a source device to a destination device. In exchanging routing information, the BGP-enabled routers of Peterson do not exchange traffic flow criteria that specify individual packet flows.

Because Peterson fails to teach or suggest all the elements of claim 1, claim 1 is not anticipated. Applicants request that the rejection be withdrawn and that claim 1 be allowed.

Regarding Claims 16, 32, 39, 46, 55, and 63

Claims 16, 32, 39, 46, 55, and 63 recite elements similar to those recited in claim 1. For reasons similar to those presented above with respect to claim 1, claims 16, 32, 39, 46, 55, and 63 are also not anticipated by Peterson. Applicants request that the rejection be withdrawn and that claims 16, 32, 39, 46, 55, and 63 be allowed.

5. In the Office Action, the Examiner rejected claims 9, 26, 37, 51, 60, 68 and 71 under 35 U.S.C. 102(e) as being anticipated by Peterson (U.S. 7421487 B1). Applicant respectfully traverses the rejection.

As argued above, claims 1, 16, 32, 46, 55, and 63 are patentable over Peterson. Claims 9, 26, 37, 51, 60, 68 and 71 incorporate all the subject matter of claims 1, 16, 32, 46, 55, and 63, respectively, and add additional subject matter, making them patentable as well over Peterson. Applicants request that the rejection be withdrawn and that claims 9, 26, 37, 51, 60, 68 and 71 be allowed.

Further, claim 9 requires that defining a flow specification data type comprises *redefining a preexisting data type of the routing protocol to define the flow specification data type*. There is no suggestion in Peterson that a preexisting data type for a routing protocol be somehow redefined in a manner that allows a specific packet flow to be defined. Contrary to the Examiner’s assertion, FIG. 4 does not illustrate a redefined data type for a routing protocol. Instead, in FIG. 4 routing information learned via BGP in a conventional manner may trigger a query to a management system in order to retrieve QoS information for a route. In no manner is a data field of a routing protocol redefined.

6. In the Office Action, the Examiner rejected claims 10, 27, 44, 53, 61, 69, 74, 77, 80, 83, 86 and 89 under 35 U.S.C. 102(e) as being anticipated by Peterson (U.S. 7421487 B1). Applicant respectfully traverses the rejection.

Claim 10, for example, requires that *defining a flow specification data type comprises defining the flow specification data type as an application-specific data type in accordance with the routing protocol*. There is no suggestion in Peterson that a flow specification data type of a routing message is defined *as an application-specific data type in accordance with the routing protocol*. Contrary to the Examiner's assertion, FIG. 4 does not illustrate a defined data type for a routing protocol. Instead, in FIG. 4 routing information learned via BGP in a conventional manner may trigger a query to a management system in order to retrieve QoS information for a route. In no manner is a data field of a routing protocol redefined.

Claim Rejection Under 35 U.S.C. § 103

15. In the Office Action, the Examiner rejected claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70,71-73, 75-76, 78-79, 81-82, 84-85,87-88, and 90-91 under 35 U.S.C. 103(a) as being unpatentable over Peterson (U.S. 7421487 B1) in view of Bays (U.S. 7139242). Applicant respectfully traverses the rejection.

The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention. As argued above, Peterson fails to teach or suggest all the elements of claims 1, 16, 32, 39, 46, 55, and 63. Each of claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70,71-73, 75-76, 78-79, 81-82, 84-85,87-88, and 90-91 depend either directly or indirectly from one of claims 1, 16, 32, 39, 46, 55, and 63, making them patentable as well over Peterson. The addition of any disclosure in Bays regarding the elements of claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70,71-73, 75-76, 78-79, 81-82, 84-85,87-88, and 90-91 does nothing to remedy the deficiencies of Peterson.

Bays discloses techniques that allow a routing control device to perform load sharing of traffic flows across network devices. The techniques disclosed in Bays make use of BGP in a conventional manner. For example, Bays states at col. 7, line 66 –col. 8, line 4, “Once a control peering session has been established, routing control device 20 controls routing in a routing

system 30 by injecting routes with better metrics than the ones installed locally. Metrics used include local-preference, weight, multi-exit discriminator, and/or others *as defined by the BGP protocol.*” (Emphasis added.) And, at col. 8, lines 42-46, Bays states, “Since routing control device 20 *is simply a BGP peer using the standard protocol*, if the peering session between routing control device 20 and the routing system 30 fails all modified routes are flushed from the routing system RIB.” (Emphasis added.) The techniques disclosed in Bays do not teach or suggest BGP messages that comprise “traffic flow criteria” in accordance with any “flow specification data type,” as in claims 1, 16, 32, 39, 46, 55, and 63. In contrast, embodiments of the present invention allow BGP to be *extended* to include these additional “traffic flow criteria” that can be used, for example, to specify individual flows of packets from a source device to a destination device. In exchanging routing information, the BGP-enabled routers of Bays do not exchange traffic flow criteria that specify individual packet flows.

Furthermore, there is no teaching in either Peterson or Bays that would have suggested that it would be advantageous or desirable to modify Peterson to incorporate the elements recited in claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70, 71-73, 75-76, 78-79, 81-82, 84-85, 87-88, and 90-91. As such, claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70, 71-73, 75-76, 78-79, 81-82, 84-85, 87-88, and 90-91 are non-obvious over the purported combination of Peterson and Bays. Applicants request that the rejection be withdrawn and that claims 2-8, 11-15, 17-25, 28-31, 33-36, 38, 40-43, 45, 47-50, 52, 54, 56-59, 62, 64-67, 70, 71-73, 75-76, 78-79, 81-82, 84-85, 87-88, and 90-91 be allowed.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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2/11/09

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